FOCUSED SITE INSPECTION PRIORITIZATION
SITE EVALUATION REPORT

PHILLIPS THOM LANDFILL
CORNER OF U.S. ROUTE 30 AND ALBRIGHT ROAD
MONTGOMERY, ILLINOIS

CERCLIS ID NO.: ILD980902134

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SITE ASSESSMENT SECTION
77 West Jackson Boulevard
Chicago, Illinois 60604

Date Prepared:	September 29, 1995
U.S. EPA Region:	5
Contract No.:	68-W0-0037
Technical Direction Document No.:	T05-9503-218
Prepared by:	Ecology and Environment, Inc.
	Patrick Cole
E & E Program Leader:	Steven Skare
Telephone No.:	(312) 663-9415

ecology and environment, inc.
International Specialists in the Environment
BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

09/15/

ecology and environment, inc.
International Specialists in the Environment
BUFFALO CORPORATE CENTER
368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

September 29, 1995

Ms. Sonia Vega
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Re: Phillips Thom Landfill
Montgomery, Illinois
CERCLIS ID No.: ILD980902134
Focused Site Inspection Prioritization
Contract No.: 68-W0-0037
TDD No.: T05-9503-218

Dear Ms. Vega:

Enclosed are the final Focused Site Inspection Prioritization (FSIP) report and enclosures for the Phillips Thom Landfill site, in Montgomery, Illinois. Draft copies of this report were submitted previously to you and to Mr. Tom Crause of the Illinois Environmental Protection Agency (IEPA).

The final FSIP is presented in two volumes. Volume 1 contains the Site Evaluation Report (SER). Volume 2 contains the United States Environmental Protection Agency Recommendation Form for the site as Enclosure 1, and a transmittal memorandum and Hazard Ranking System (HRS) scoresheets as Enclosure 2.

Should you have any questions, please call me at 716/684-8060.

Sincerely,

Patrick Cole

Patrick Cole
Ecology and Environment, Inc.

cc: Steve Skare, Ecology and Environment, Inc.
Tom Crause, IEPA

ecology and environment, inc.
International Specialists in the Environment
BUFFALO CORPORATE CENTER
368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

September 15, 1995

I.1
9/29/95

Ms. Sonia Vega
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Phillips Thom Landfill
Montgomery, Illinois
CERCLIS ID No.: ILD980902134
Focused Site Inspection Prioritization
Contract No.: 68-W0-0037
TDD No.: T05-9503-218

Dear Ms. Vega:

Ecology and Environment, Inc., (E & E) has prepared the enclosed Site Evaluation Report (SER) for the above-referenced site. IEPA Well Sample Analytical Data are included in Appendix A of the SER. Appendix B contains pertinent references used in the preparation of this SER. Per your request, references not provided include: documents that are currently available within United States Environmental Protection Agency (U.S. EPA) files; copyrighted documents that are currently available in E & E's library; maps produced by either the United States Geologic Survey or the Illinois State Geologic Survey; and documents that are created by the various state agencies for public use.

E & E reviewed available information and prepared a preliminary Hazard Ranking System (HRS) score for the Phillips Thom Landfill site using PREscore Software (Version 3.0), Publication No. 9450.2200, dated August 1994. Based on E & E's findings, the preliminary HRS score for the Phillips Thom Landfill site is greater than 28.50. Therefore, E & E recommends that the site receive an ESI-STEP designation.

The U.S. EPA Recommendation Form is included in Enclosure 1. The Phillips Thom Landfill site's preliminary HRS score is documented in a transmittal memorandum and the HRS scoresheets presented in Enclosure 2.

If you have any questions, please call me at 716/684-8060.

Sincerely,

Patrick Cole

Patrick Cole

PC/dlw
Enclosures (2)

xc: Steven Skare, E & E Program Leader
Tom Crause, IEPA

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1. INTRODUCTION

The Ecology and Environment, Inc., (E & E) Technical Assistance Team (TAT) was assigned by the United States Environmental Protection Agency (U.S. EPA), under Contract No. 68-W0-0037, Technical Direction Document (TDD) No. T05-9503-218, to evaluate the Phillips Thom Landfill site in Montgomery, Kane County, Illinois. E & E performed Focused Site Inspection Prioritization (FSIP) activities to determine whether, or to what extent, the site poses a threat to human health and the environment. This FSIP report presents the results of E & E's evaluation and summarizes the site conditions and targets pertinent to the migration and exposure pathways associated with the site. Background information was obtained from a Preliminary Assessment (PA) report (Illinois Environmental Protection Agency [IEPA] 1984), a Site Inspection (SI) report (E & E 1986), and U.S. EPA files.

This report is organized into six sections, including this introduction. Section 2 describes the site and provides a brief site history. Section 3 provides information about previous investigations conducted at the site. Section 4 provides information about the four migration and exposure pathways (groundwater migration, surface water migration, soil exposure, and air migration). Section 5 is a summary of the FSIP. References used in the preparation of this report are listed in Section 6.

2. SITE DESCRIPTION AND HISTORY

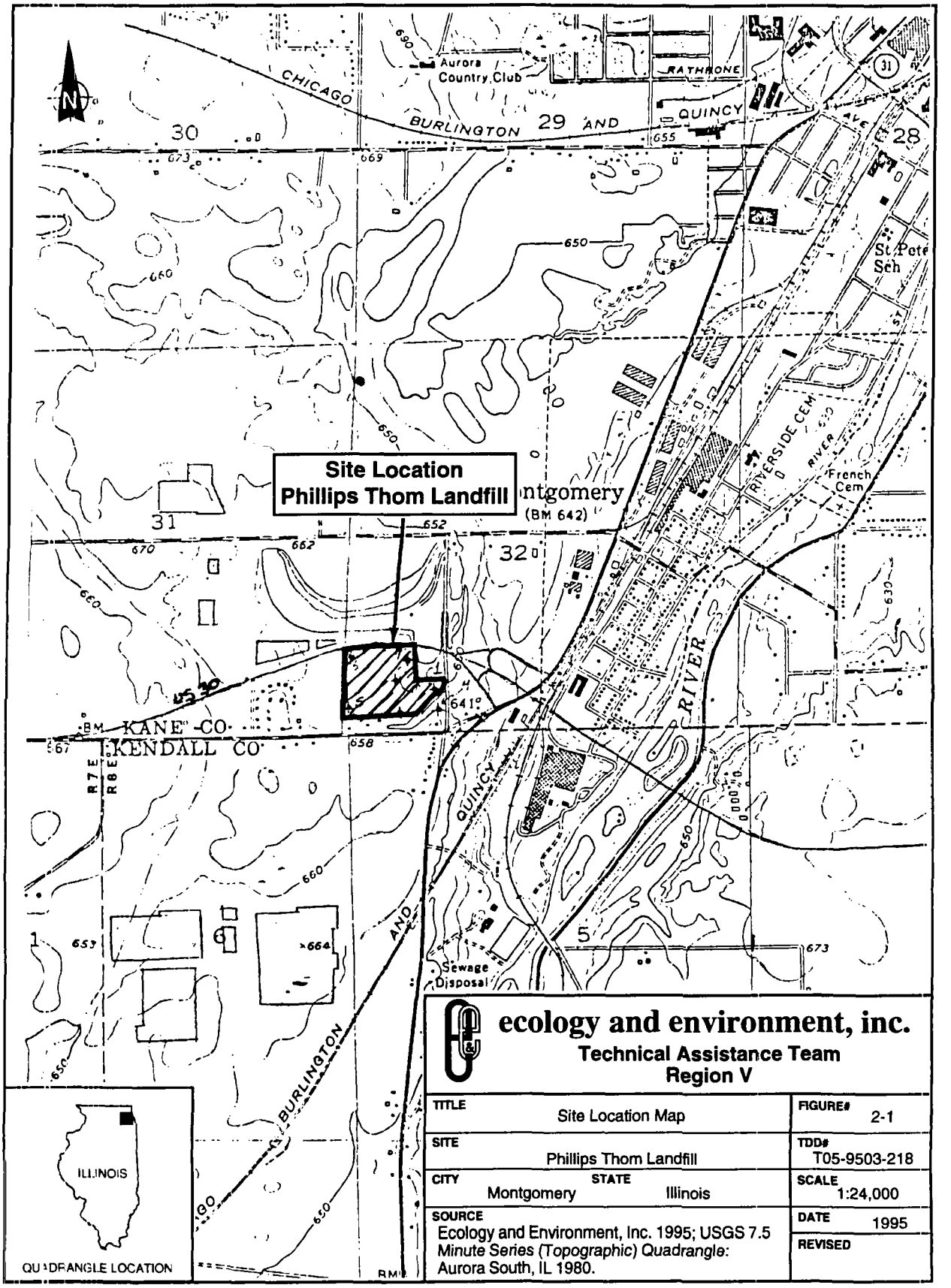
The Phillips Thom Landfill site is located at the bypass of U.S. Route 30 and Albright Road, in Montgomery, Kane County, Illinois (SW1/4 sec. 32, T. 38 N., R. 8 E.). Coordinates for the site are latitude 41°43'30" North and longitude 88°21'50" West (E & E 1986). The site is currently closed (Harbaugh 1995) and is bordered by U.S. Route 30 to the north and west, Albright Road to the east, and Baseline Road to the south. The site is located 2 miles southwest of Aurora and 0.5 mile west of the Fox River. The area surrounding the site is a mixture of residential, agricultural, and industrial properties. The site location is shown in Figure 2-1.

The site is situated on approximately 22 acres of land. Site features are shown in Figure 2-2. The site is partially fenced along the north just south of U.S. Route 30, in the northeast from the asphalt plant to an access road, and along the north side of the access road. Stockpiled cover is located in the northwest portion of the site and by the eastern boundary of the site south of the access road. A gate across the access road prevents entry onto the site. A maintenance building is located on the access road, east of the gate. The Fox River, the nearest surface water body, at its nearest point to the site, is located approximately 0.5 mile east of the site. The surrounding terrain is generally level and is situated above the floodplain of the Fox River. The site consists of backfill material of a previously completed gravel and borrow pit.

The excavation of the pit was completed in 1958, at which time the landfilling operations began. The original excavation was from 10 to 15 feet in depth and had a surface area of approximately 10 acres. The pit displays a tendency to hold water rather than allow it to pass through its base (E & E 1986).

The landfill was in operation from 1958 to 1976. Ownership of the site is uncertain. According to the 1984 PA, Mr. David Thom owned the site and operated it from 1974 to 1976. According to the 1986 SI, Mr. Jim Phillips owned the site and operated it from 1964 to 1976. Currently, Mr. Phillips owns the site. The facility was issued a developmental

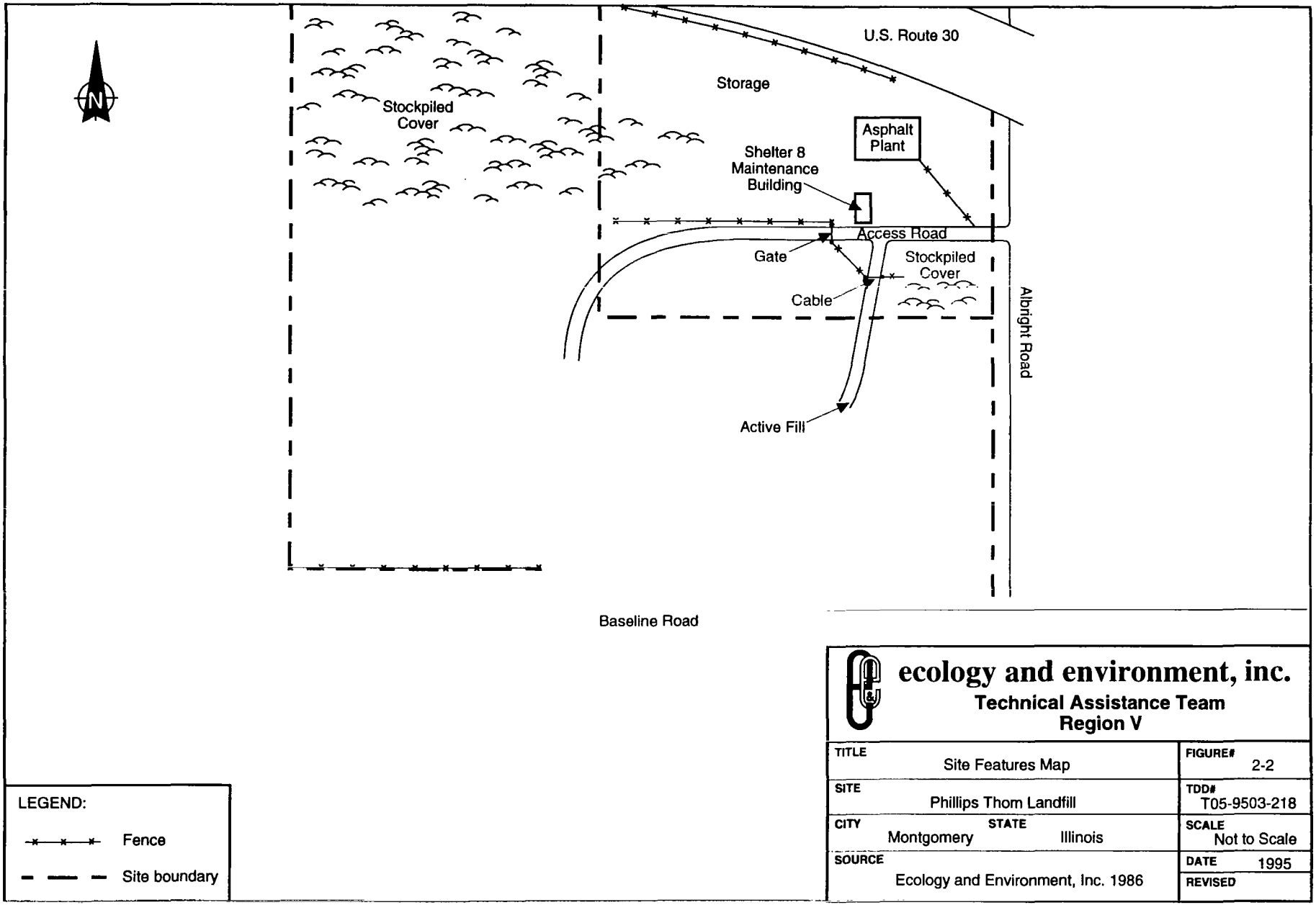
permit by the IEPA on March 18, 1975, which allowed the facility to accept only clean earthen materials, portland cement, concrete, bricks, and asphaltic cement (IEPA 1984). The only two contributors to the site that can be identified are Armour/Dial and Caterpillar Corporation. After completion of landfill operations in 1976, the fill was covered with 30 inches of clay. It is unknown whether or not Phillips Thom Landfill had any Resource Conservation and Recovery Act (RCRA) or National Pollutant Discharge Elimination System (NPDES) permits.



ecology and environment, inc.
Technical Assistance Team
Region V

TITLE	Site Location Map	FIGURE#	2-1
SITE	Phillips Thom Landfill	TDD#	T05-9503-218
CITY	Montgomery	STATE Illinois	SCALE 1:24,000
SOURCE	Ecology and Environment, Inc. 1995; USGS 7.5 *Minute Series (Topographic) Quadrangle:* Aurora South, IL 1980.	DATE	1995
		REVISED	

02: TAT\ZT305148.CDR



LEGEND:

Fence

Site boundary

ecology and environment, inc.
Technical Assistance Team
Region V

TITLE: Site Features Map	FIGURE#: 2-2
SITE: Phillips Thom Landfill	TDD#: T05-9503-218
CITY: Montgomery STATE: Illinois	SCALE: Not to Scale
SOURCE: Ecology and Environment, Inc. 1986	DATE: 1995
	REVISED:

3. PREVIOUS INVESTIGATIONS

The site was initially discovered in 1974 through complaints filed with the Illinois Pollution Control Board (IPCB) for operating in violation of the Illinois Environmental Protection Act and Chapter 7 of the IPCB Rules and Regulations on Solid Wastes. The Phillips Thom Landfill site was inspected on January 16, 1975, by Mr. Robert Wengrow of the IEPA. The inspection disclosed possible violations such as open dumped concrete, wood, tires, and appliances, lack of site access restriction, unsupervised dumping in more than one area, and lack of daily cover. The site was again inspected on August 12 and 13, 1975, by Mr. Rene Van Someren and on August 14 and 15, 1975, by Mr. Kenneth Bechely, both of the IEPA. The inspections revealed the following conditions. Openly dumped refuse was observed during the first inspection day of each two-day set. This same refuse was then observed on the second inspection day of each two-day set, indicating that refuse accepted on both August 12 and 14, 1975, had received no daily cover. Other portions of the site that had received some cover did not meet the minimum requirement of 6 inches of compacted cover material (E & E 1986).

On June 28, 1984, a PA report was submitted by the IEPA. The purpose of the 1984 PA was to determine the severity of the Phillips Thom Landfill site and to give it a priority for inspection. The PA determined that the site is a 13-acre landfill located at the intersection of U.S. Route 30 and Albright Road, which was owned and operated from September 1974 to May 1976 by D & N Trucking Company. The facility was issued a developmental permit by the IEPA on March 18, 1975, which allowed the facility to accept only clean earthen materials, portland cement, concrete, bricks, and asphaltic cement. Complaints were again filed with the IPCB in 1976 for operating in violation of the Illinois Environmental Protection Act and Chapter 7 of the IPCB Rules and Regulations on Solid Wastes. In 1976, subsequent orders by the IPCB resulted in cessation of operations and covering of the site with 30 inches of clay.

IEPA files show no record of the site having accepted any hazardous materials. An IEPA groundwater study was conducted in 1979; however, a final report was not prepared. Preliminary evidence indicated that samples of monitoring wells and private wells east of the site showed some evidence of contamination (IEPA 1984). The IEPA conducted sampling of groundwater wells in 1981 and 1983. Polychlorinated biphenyls (PCBs) were detected as high as 25 micrograms per liter (μg/L) in on-site monitoring wells and as high as 0.12 μg/L in two off-site private drinking wells (E & E 1986).

On July 16, 1986, the E & E Field Investigation Team (FIT) performed an on-site visual inspection and submitted an SI report to the U.S. EPA dated August 26, 1986. E & E FIT determined that the Phillips Thom Landfill site was a closed and covered 22-acre landfill. The only two contributors to the site that can be identified from site files are Armour/Dial and Caterpillar Corporation. Seven monitoring wells were installed on site in 1976 and at least three more at a later date. It is currently unknown who installed the monitoring wells. Monitoring well sampling was attempted by E & E FIT during the 1986 SI; however, the wells were inoperative due to obstructions in the well pipes, so no samples were collected. An interview with site owner Mr. Jim Phillips was conducted during the SI. Mr. Phillips stated that only homogenous demolition wastes were disposed of on site (E & E 1986).

The Phillips Thom Landfill site relies on an in situ bottom clay liner, but no sidewall liner, berm, or containment of any type to prevent the lateral migration of contaminants exists. Well heads on site registered between 40 to greater than 100 parts per million (ppm) of methane and volatile organic compounds (VOCs) on the organic vapor analyzer (OVA) meter during the 1986 SI conducted by E & E FIT (E & E 1986).

4. MIGRATION AND EXPOSURE PATHWAYS

This section describes the four migration and exposure pathways associated with the Phillips Thom Landfill site. Section 4.1 discusses the groundwater migration pathway; Section 4.2 discusses the surface water migration pathway; Section 4.3 discusses the soil exposure pathway; and Section 4.4 discusses the air migration pathway.

4.1 GROUNDWATER MIGRATION PATHWAY

This section discusses regional geology and soils, groundwater releases, and targets associated with the groundwater migration pathway at the site.

4.1.1 Geology and Soils

The Phillips Thom Landfill site is located on glacial materials that are relatively thin (less than 50 feet) and consist mostly of sand and gravel. Beneath the glacial drift in the northern part of the site lies Silurian-age dolomite and in the southern part lies Maquoketa shale. Private farm and domestic wells are finished in these units throughout the area of interest. Most municipal and industrial wells in the area tap into deeper-lying units of the Cambrian-Ordovician aquifer.

The residents of Montgomery obtain drinking water from a combination of private and community wells. The private wells draw groundwater from the glacial materials at depths from 20 to 70 feet below ground surface (BGS). Community wells draw groundwater from the Silurian dolomite, Maquoketa shale, or Cambrian-Ordovician aquifers at depths between 500 to 2,000 feet BGS (E & E 1986). The sand and gravel deposits are believed to be hydrologically connected with the underlying dolomite.

4.1.2 Groundwater Releases

A potential for release of hazardous substances from the Phillips Thom Landfill site to groundwater exists based on site conditions at the time of the 1986 SSI. During an IEPA groundwater study in 1981, PCBs were detected in an on-site monitoring well at a concentration of 25 μg/L. Any wells drawing from the Silurian or Maquoketa units could be potentially affected (E & E 1986).

A groundwater sample taken from an off-site residential well contained PCBs at a concentration of 0.12 μg/L (E & E 1986). There is an in situ bottom clay liner, but no sidewall liners, berms, or other means of restricting lateral migration of contaminants from the site. Groundwater flow in the area of the site is to the east-northeast toward the Fox River (E & E 1986).

4.1.3 Targets

The 61,452 residents of Montgomery and Aurora within 4 miles of the site obtain drinking water from a series of private and community wells. Of these wells, the closest is a private well located approximately 300 feet south of the Phillips Thom Landfill. The community wells are located 1.25 miles or greater from the site. Pumping information for these wells is not available; therefore, it is assumed that all municipal well contribute equally to the municipal water supply (E & E 1986).

4.2 SURFACE WATER MIGRATION PATHWAY

Surface water or sediment samples are not known to have been collected during previous investigations. Based on conditions at the time of the 1986 SI, it is unlikely that a release to surface water has occurred. However, a potential for lateral movement of contaminants exists, due to the lack of any sidewall liners or other engineering controls. The slope of the site is between 0-3%. The site slopes to the east toward the Fox River.

The Fox River, the nearest surface water body, is located approximately 0.5 mile from the site and is a recreational area used for fishing and boating (DeLorme 1991). A water intake exists on the Fox river at 110 Aurora Avenue approximately 3 to 5 miles upstream. The site is located outside the 500-year floodplain of the Fox River. No wetlands or sensitive environments are known to exist along the Fox River within 15 miles downstream of the site (E & E 1986).

4.3 SOIL EXPOSURE PATHWAY

A potential exists for a release of hazardous substances from the Phillips Thom Landfill site to surrounding soils. PCBs were detected in on-site monitoring wells that might be attributable to the landfill soil, but attribution could not be confirmed (E & E 1986). However, no soil samples have been collected on site during past investigations of the site.

The site is a closed and covered landfill with limited fencing along the north and northeast sides of the site. Access to the site is not restricted. The site is located in a light industrial/residential area with private homes bordering the site on two sides and trucking depots and businesses on the other two sides. No sensitive environments or wetlands are known to exist within 4 miles of the site (E & E 1986). The Phillips Thom Landfill site has been cited by the IEPA in the past for lack of daily cover and unsupervised dumping.

4.4 AIR MIGRATION PATHWAY

The potential for a release of hazardous substances to air exists. OVA air monitoring readings taken during the 1986 E & E SI detected methane and total organics at concentrations that were off-scale at a setting of 100X (greater than 100 parts per million [ppm]) for on-site monitoring wells.

No workers are employed at the Phillips Thom Landfill site, which has been closed since 1976.

No engineering controls to prevent air emission from the site are on the site. There are also no records of citizen complaints of odors in the past.

5. SUMMARY

E & E has evaluated the Phillips Thom Landfill Site, which has been an inactive facility since approximately 1976. The site served as a landfill from 1958 to 1976. In 1974, complaints were filed with the IPCB against the facility owner for operating in violation of Chapter 7 of the IPCB Rules and Regulations on Solid Wastes and the Environmental Protection Act. Subsequent orders by the IPCB resulted in cessation of operations and covering of the site in 1976. The IEPA conducted sampling of on-site monitoring wells and private residential wells in 1981 and 1983 and detected PCBs in both monitoring wells and residential wells.

The City of Montgomery obtains drinking water from community and private wells. The private wells draw groundwater from the glacial materials at depths from 20 to 70 feet BGS. Community wells draw groundwater from the Silurian dolomite, Maquoketa shale, or deeper Cambrian-Ordovician aquifers at depths between 500 to 2,000 feet BGS.

The lack of sidewall liners, berms, or any other means of restricting lateral migration would allow hazardous substances to migrate from the site to the aquifer. A monitoring well sample on ysite revealed PCBs at a concentration of 25 μg/L and a residential well sample contained 0.12 μg/L of PCBs. These two samples show contamination of groundwater.

A release of hazardous substances to surface water is unlikely based on site conditions at time of the SI. The Fox River, the nearest surface water body, is located approximately 0.5 mile east of the site. The Phillips Thom Landfill is not located in the floodplain of the Fox River. However, the potential exists for lateral movement of contaminants due to the lack of any sidewall liners.

A potential exists for a release of hazardous substances from the Phillips Thom Landfill site to surrounding soils. PCBs were detected in on-site monitoring wells that might be attributable to the landfill soil, but attribution could not be confirmed. The Phillips Thom Landfill site is not completely fenced and is located near residences, the nearest of which is

approximately 300 feet from the site. No schools or daycare facilities are located within 200 feet of the site, and no known sensitive environments are located near the site.

A release of hazardous substances to air is possible, given site conditions at the time of the SI. No records of complaints regarding odors are known to exist, but OVA readings taken in 1986 were greater than 100 ppm for methane and total organics.

6. REFERENCES

References not included in Appendix B: documents that are currently available within U.S. EPA files; copyrighted documents that are currently available in E & E's library; maps produced by either the United States Geologic Survey or the Illinois State Geologic Survey; and documents that are created by the various state agencies for public use.

Aurora Water Department, August 23, 1995, personal communication, telephone conversation with Patrick Cole, Ecology and Environment, Inc.

DeLorme Mapping, 1991, *Illinois Atlas and Gazetteer*, Freeport, Maine.

Ecology and Environment, Inc., (E & E), August 26, 1986, *Site Inspection Report for Montgomery/Phillips Landfill*, Montgomery, Illinois, U.S. EPA ID No. ILD980902134, Chicago, Illinois.

Harbaugh, Tim, August 23, 1995, personal communication, Kane County Health Department, telephone conversation with Patrick Cole, Ecology and Environment, Inc., Buffalo, New York.

Illinois Environmental Protection Agency (IEPA), January 28, 1984, *Preliminary Assessment Report for Montgomery/Phillips*, Springfield Illinois.

Rand McNally, 1994, *Commercial Atlas & Marketing Guide 125th Edition*, Chicago, Illinois.

United States Geological Survey (USGS), 1980, 7.5 Minute Series (Topographic) Quadrangle, Aurora South, Illinois.

APPENDIX A

IEPA ANALYTICAL DATA

-g+Bttles

SEND COPIES TO RICHFORD

REC'D CHICAGO LA
BY:
DATE: 2.10.83
27682

Time Collected: 12:15PM

Date Collected: 2/9/83

Lab #

SPECIAL ANALYSIS FORM

Date Received: FEB 14 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
KANE	MONTGOMERY/PHILLIPS	0890550?

SOURCE OF SAMPLE: (Exact Location) G202. Tucker Freight Lines. From outside faucet on west wall.

PHYSICAL OBSERVATIONS, REMARKS: Clear with very slight rust tinge, no odor.

TESTS REQUESTED: PCB's, Solvents.

COLLECTED BY: K. Barzo TRANSPORTED BY: K. Barzo

LABORATORY

RECEIVED BY: C.C. DATE COMPLETED: 27682 DATE FORWARDED: 6/22/83

(PCB 0.1? ug/l ppm)

Organic solvents not detected in the extract of this sample.

RECEIVED

JUN 27 1983

STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

H.W. ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Time Collected: 12:12 P.M. Lab # DU12588

SPECIAL ANALYSIS FORM

Date Collected: 1-13-81 Date Received JAN 14 1981

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
KANE	MONTGOMERY/PHILLIPS	0890550 1

SOURCE OF SAMPLE: (Exact Location)

L-314 LEACHATE WELL

PHYSICAL OBSERVATIONS, REMARKS: BAILED SAMPLE

TESTS REQUESTED: PCB

COLLECTED BY: KEN BOSIE & DOUG TOLAN DLPC TRANSPORTED BY: KEN BOSIE & DOUG TOLAN DLPC

LABORATORY

RECEIVED BY: D.E. DATE COMPLETED: 2-13-81 DATE FORWARDED: 2-13-81 J. Hunsey

PCB 25 ug/l

RECEIVED
FEB 19 1981
EPA — DLPC
STATE OF ILLINOIS

EPA-DLPC

DU12588
JAN 14 1981

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

APPENDIX B

REFERENCE DOCUMENTATION

ecology and environment, inc.
CHICAGO, ILLINOIS

TELEPHONE LOG

REFERENCE

CONTACT	COMPANY or AGENCY	POSITION
Tim Harbaugh	Kane Co. Health Dept.	

CONTACT ADDRESS	CONTACT PHONE NUMBER
	1-(708) 208-~~3801~~ 5118

E&E EMPLOYEE	DATE	TIME
Patrick Cole	August 23, 1995	3:00 p.m.

PROJECT NUMBER	SITE NAME and LOCATION
	Phillips Thom Landfill

DISCUSSION

Phillips Thom is a closed landfill.

SIGNATURE

Patrick Cole

PAGE 1 OF 1

ecology and environment, inc.
CHICAGO, ILLINOIS

TELEPHONE LOG

REFERENCE

CONTACT	COMPANY or AGENCY	POSITION
Chris	Aurora Water Dept.	

CONTACT ADDRESS	CONTACT PHONE NUMBER
110 Aurora Ave.	1-708-844-3611

E&E EMPLOYEE	DATE	TIME
Patrick Cole	August 23, 1995	3:05 p.m.

PROJECT NUMBER	SITE NAME and LOCATION
	Phillips Thom Landfill

DISCUSSION

Chris said water intake located at 110 Aurora Ave.

He wouldn't give his last name.

SIGNATURE

Patrick Cole

PAGE 1 OF 1